10/082,714

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FILE 'HOME' ENTERED AT 13:35:46 ON 01 NOV 2005

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*** YOU HAVE NEW MAIL ***

=> s biosensor? and current
L1        10860 BIOSENSOR? AND CURRENT

=> sl1 and plurality (3a) nucleic acid?
SL1 IS NOT A RECOGNIZED COMMAND
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"HELP COMMANDS" at an arrow prompt (=>).

=> s l1 and plurality (3a) nucleic acid?
<------User Break------>

SEARCH ENDED BY USER

=> s l1 and plurality (3a) (nucleic acid? or oligonucleotide?)
   3 FILES SEARCHED...
L2          600 L1 AND PLURALITY (3A) (NUCLEIC ACID? OR OLIGONUCLEOTIDE?)

=> s l2 and measur? (3a) current
L3           48 L2 AND MEASUR? (3A) CURRENT

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4           48 DUP REM L3 (0 DUPLICATES REMOVED)

=> s l4 and plurality (3a) electrode?
L5            8 L4 AND PLURALITY (3A) ELECTRODE?

=> d l5 bib abs 1-8

L5   ANSWER 1 OF 8  USPATFULL on STN
AN     2005:158215  USPATFULL
TI     Method and biosensors for detecting macromolecular biopolymers
IN     Paulus, Christian, Weilheim, GERMANY, FEDERAL REPUBLIC OF
       Schindler-Bauer, Petra T., Vaterstetten, GERMANY, FEDERAL REPUBLIC OF
PA     Infineon Technologies AG, Munich, GERMANY, FEDERAL REPUBLIC OF (non-U.S.
       corporation)
PI     US 2005136423      A1   20050623
AI     US 2004-841413     A1   20040507 (10)
RLI    Continuation of Ser. No. WO 2002-DE4171, filed on 11 Nov 2002, UNKNOWN
PRAI   DE 2001-155892      20011114
DT     Utility
```

FS APPLICATION
LREP DARBY & DARBY P.C., P. O. BOX 5257, NEW YORK, NY, 10150-5257, US
CLMN Number of Claims: 33
ECL Exemplary Claim: 1-25
DRWN 8 Drawing Page(s)
LN.CNT 1135
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Method for detecting macromolecular biopolymers using a unit for immobilizing macromolecular biopolymers, in which the unit is provided with first molecules serving as capture molecules. The method includes the steps of bringing a sample into contact with the unit, it being possible for the sample to contain the macromolecular biopolymers, and the macromolecular biopolymers or the first molecules having a marking which is used to generate a detectable signal, binding macromolecular biopolymers contained in the sample to the capture molecules, thereby forming complexes comprising capture molecules and macromolecular biopolymers, exciting the emission of a signal by means of the marking, detecting the signal emitted by means of the marking, separating the complexes comprising capture molecules and macromolecular biopolymers, thereby altering the intensity of the emitted signal, and detecting the separation of the complexes comprising capture molecules and macromolecular biopolymers by means of the change in the intensity of the signal.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 2 OF 8 USPATFULL on STN
AN 2004:94706 USPATFULL
TI Electrochemical detection of nucleic acid sequences
IN Henkens, Robert W., Beaufort, NC, UNITED STATES
O'Daly, John P., Carrboro, NC, UNITED STATES
Wojciechowski, Marek, Cary, NC, UNITED STATES
Zhang, Honghua, San Diego, CA, UNITED STATES
Naser, Najih, Orlando, FL, UNITED STATES
Roe, R. Michael, Apex, NC, UNITED STATES
Stewart, Thomas N., Durham, NC, UNITED STATES
Thompson, Deborah M., Raleigh, NC, UNITED STATES
Sundseth, Rebecca, Durham, NC, UNITED STATES
Wegner, Steven E., Chapel Hill, NC, UNITED STATES
PI US 2004072158 A1 20040415
AI US 2002-82714 A1 20020225 (10)
RLI Division of Ser. No. US 2000-549853, filed on 14 Apr 2000, GRANTED, Pat. No. US 6391558 Continuation-in-part of Ser. No. US 1998-44206, filed on 17 Mar 1998, ABANDONED
PRAI US 1997-40949P 19970318 (60)
DT Utility
FS APPLICATION
LREP Atten. Gregory A Nelson, Akerman Senterfitt, Suite 400, 222 Lakeview Avenue P O Box 3188, West Palm Beach, FL, 33402-3188
CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN 20 Drawing Page(s)
LN.CNT 4480
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An electrochemical detection system which specifically detects selected nucleic acid segments is described. The system utilizes biological probes such as nucleic acid or peptide nucleic acid probes which are complementary to and specifically hybridize with selected nucleic acid segments in order to generate a **measurable current** when an amperometric potential is applied. The electrochemical signal can be quantified.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 3 OF 8 USPATFULL on STN
AN 2004:70063 USPATFULL
TI Devices and methods for biochip multiplexing
IN Terbrueggen, Robert Henry, Hermosa Beach, CA, UNITED STATES

Blackburn, Gary F., Glendora, CA, UNITED STATES
Chason, Marc Kenneth, Schaumburg, IL, UNITED STATES
Dai, Xunhu, Gilbert, AZ, UNITED STATES
Eliacin, Manes, Buffalo Grove, IL, UNITED STATES
Grodzinski, Piotr, Santa Fe, NM, UNITED STATES
Irvine, Bruce Duncan, Glendora, CA, UNITED STATES
Kayyem, Jon Faiz, Pasadena, CA, UNITED STATES
Lian, Keryn Ke, Palatine, IL, UNITED STATES
Liu, Robin Hui, Chandler, AZ, UNITED STATES
O'Rourke, Shawn Michael, Tempe, AZ, UNITED STATES
Sheldon, Edward Lewis, III, Arcadia, CA, UNITED STATES
Zenhausern, Frederic, Fountain Hills, AZ, UNITED STATES

PI US 2004053290 A1 20040318
AI US 2003-412660 A1 20030411 (10)
RLI Continuation of Ser. No. US 2002-193712, filed on 11 Jul 2002, ABANDONED Continuation-in-part of Ser. No. US 2001-904175, filed on 11 Jul 2001, PENDING Continuation-in-part of Ser. No. US 2001-993342, filed on 5 Nov 2001, PENDING Continuation-in-part of Ser. No. US 2001-760384, filed on 11 Jan 2001, PENDING Continuation-in-part of Ser. No. WO 2001-US44364, filed on 5 Nov 2001, PENDING Continuation-in-part of Ser. No. WO 2001-US1150, filed on 11 Jan 2001, PENDING
PRAI US 2000-175539P 20000111 (60)
US 2000-245840P 20001103 (60)
DT Utility
FS APPLICATION
LREP DORSEY & WHITNEY LLP, INTELLECTUAL PROPERTY DEPARTMENT, 4 EMBARCADERO CENTER, SUITE 3400, SAN FRANCISCO, CA, 94111
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 52 Drawing Page(s)
LN.CNT 6000
AB The invention is directed to devices that allow for simultaneous multiple biochip analysis. In particular, the devices are configured to hold multiple cartridges comprising biochips comprising arrays such as nucleic acid arrays, and allow for high throughput analysis of samples.

L5 ANSWER 4 OF 8 USPATFULL on STN
AN 2003:294281 USPATFULL
TI Nanoparticles having oligonucleotides attached thereto and uses therefor
IN Park, So-Jung, Austin, TX, UNITED STATES
Taton, Thomas Andrew, Little Canada, MN, UNITED STATES
Mirkin, Chad A., Wilmette, IL, UNITED STATES

PI US 2003207296 A1 20031106
AI US 2002-266983 A1 20021008 (10)
RLI Continuation-in-part of Ser. No. US 2001-8978, filed on 7 Dec 2001, PENDING Continuation-in-part of Ser. No. US 2001-927777, filed on 10 Aug 2001, PENDING Continuation-in-part of Ser. No. US 2001-820279, filed on 28 Mar 2001, PENDING Continuation-in-part of Ser. No. US 2001-760500, filed on 12 Jan 2001, PENDING Continuation-in-part of Ser. No. US 2000-603830, filed on 26 Jun 2000, GRANTED, Pat. No. US 6506564 Continuation-in-part of Ser. No. US 1999-344667, filed on 25 Jun 1999, GRANTED, Pat. No. US 6361944 Continuation-in-part of Ser. No. US 1999-240755, filed on 29 Jan 1999, ABANDONED Continuation-in-part of Ser. No. WO 1997-US12783, filed on 21 Jul 1997, PENDING
PRAI US 2001-327864P 20011009 (60)
US 2000-254418P 20001208 (60)
US 2000-255236P 20001211 (60)
US 2001-282640P 20010409 (60)
US 2000-224631P 20000811 (60)
US 2000-192699P 20000328 (60)
US 2000-254392P 20001208 (60)
US 2000-255235P 20001211 (60)
US 2000-176409P 20000113 (60)
US 2000-213906P 20000626 (60)
US 2000-200161P 20000426 (60)
US 1996-31809P 19960729 (60)
DT Utility

FS APPLICATION
LREP MCDONNELL BOEHNEN HULBERT & BERGHOFF, 300 SOUTH WACKER DRIVE, SUITE 3200, CHICAGO, IL, 60606
CLMN Number of Claims: 677
ECL Exemplary Claim: 1
DRWN 75 Drawing Page(s)
LN.CNT 12981
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides methods of detecting a nucleic acid. The methods comprise contacting the nucleic acid with one or more types of particles having oligonucleotides attached thereto. In one embodiment of the method, the oligonucleotides are attached to nanoparticles and have sequences complementary to portions of the sequence of the nucleic acid. A detectable change (preferably a color change) is brought about as a result of the hybridization of the oligonucleotides on the nanoparticles to the nucleic acid. The invention also provides compositions and kits comprising particles. The invention further provides methods of synthesizing unique nanoparticle-oligonucleotide conjugates, the conjugates produced by the methods, and methods of using the conjugates. In addition, the invention provides nanomaterials and nanostructures comprising nanoparticles and methods of nanofabrication utilizing nanoparticles. Finally, the invention provides a method of separating a selected nucleic acid from other nucleic acids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 5 OF 8 USPATFULL on STN
AN 2003:127030 USPATFULL
TI Nanoparticles having oligonucleotides attached thereto and uses therefor
IN Mirkin, Chad A., Wilmette, IL, UNITED STATES
Letsinger, Robert L., Wilmette, IL, UNITED STATES
Taton, Thomas Andrew, Little Canada, MN, UNITED STATES
Lu, Gang, Mt Prospect, IL, UNITED STATES
PI US 2003087242 A1 20030508
AI US 2001-8978 A1 20011207 (10)
RLI Continuation-in-part of Ser. No. US 2001-927777, filed on 10 Aug 2001, PENDING Continuation-in-part of Ser. No. US 2001-820279, filed on 28 Mar 2001, PENDING Continuation-in-part of Ser. No. US 2001-760500, filed on 12 Jan 2001, PENDING Continuation-in-part of Ser. No. US 2000-603830, filed on 26 Jun 2000, PENDING Continuation-in-part of Ser. No. US 1999-344667, filed on 25 Jun 1999, GRANTED, Pat. No. US 6361944 Continuation-in-part of Ser. No. US 1999-240755, filed on 29 Jan 1999, ABANDONED Continuation-in-part of Ser. No. WO 1997-US12783, filed on 21 Jul 1997, UNKNOWN
PRAI US 1996-31809P 19960729 (60)
US 2000-176409P 20000113 (60)
US 2000-192699P 20000328 (60)
US 2000-200161P 20000426 (60)
US 2000-213906P 20000626 (60)
US 2000-224631P 20000811 (60)
US 2000-254392P 20001208 (60)
US 2000-254418P 20001208 (60)
US 2000-255235P 20001211 (60)
US 2000-255236P 20001211 (60)
US 2001-282640P 20010409 (60)
DT Utility
FS APPLICATION
LREP MCDONNELL BOEHNEN HULBERT & BERGHOFF, 300 SOUTH WACKER DRIVE, SUITE 3200, CHICAGO, IL, 60606
CLMN Number of Claims: 626
ECL Exemplary Claim: 1
DRWN 71 Drawing Page(s)
LN.CNT 12308
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides methods of detecting a nucleic acid. The methods comprise contacting the nucleic acid with one or more types of particles having oligonucleotides attached thereto. In one embodiment of the method, the oligonucleotides are attached to nanoparticles and have

sequences complementary to portions of the sequence of the nucleic acid. A detectable change (preferably a color change) is brought about as a result of the hybridization of the oligonucleotides on the nanoparticles to the nucleic acid. The invention also provides compositions and kits comprising particles. The invention further provides methods of synthesizing unique nanoparticle-oligonucleotide conjugates, the conjugates produced by the methods, and methods of using the conjugates. In addition, the invention provides nanomaterials and nanostructures comprising nanoparticles and methods of nanofabrication utilizing nanoparticles. Finally, the invention provides a method of separating a selected nucleic acid from other nucleic acids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 6 OF 8 USPATFULL on STN
AN 2002:314658 USPATFULL
TI Devices and methods for biochip multiplexing
IN Doung, Hau H., Los Angeles, CA, UNITED STATES
Blackburn, Gary, Glendora, CA, UNITED STATES
Kayyem, Jon F., Pasadena, CA, UNITED STATES
O'Connor, Stephen D., Pasadena, CA, UNITED STATES
Olsen, Gary T., La Cresenta, CA, UNITED STATES
Pietri, Robert, Pasadena, CA, UNITED STATES
Swami, Nathan, South Pasadena, CA, UNITED STATES
Terbrueggen, Robert H., Manhattan Beach, CA, UNITED STATES
PI US 2002177135 A1 20021128
AI US 2001-904175 A1 20010711 (9)
RLI Continuation of Ser. No. US 2001-760384, filed on 11 Jan 2001, PENDING
Continuation of Ser. No. WO 2001-US1150, filed on 11 Jan 2001, UNKNOWN
PRAI US 2000-175539P 20000111 (60)
US 1999-145840P 19990727 (60)
DT Utility
FS APPLICATION
LREP FLEHR HOHBACH TEST ALBRITTON & HERBERT LLP, Suite 3400, Four Embarcadero Center, San Francisco, CA, 94111-4187
CLMN Number of Claims: 23
ECL Exemplary Claim: 1
DRWN 42 Drawing Page(s)
LN.CNT 5001
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention is directed to devices that allow for simultaneous multiple biochip analysis. In particular, the devices are configured to hold multiple cartridges comprising biochips comprising arrays such as nucleic acid arrays, and allow for high throughput analysis of samples.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 7 OF 8 USPATFULL on STN
AN 2002:307830 USPATFULL
TI Movement of biomolecule-coated nanoparticles in an electric field
IN Mirkin, Chad A., Wilmette, IL, UNITED STATES
Letsinger, Robert L., Wilmette, IL, UNITED STATES
Mucic, Robert C., Glendale, CA, UNITED STATES
Storhoff, James J., Evanston, IL, UNITED STATES
Elghanian, Robert, Chicago, IL, UNITED STATES
Taton, Thomas Andrew, Chicago, IL, UNITED STATES
Garimella, Viswanadham, Evanston, IL, UNITED STATES
Li, Zhi, Evanston, IL, UNITED STATES
Park, So-Jung, Evanston, IL, UNITED STATES
PI US 2002172953 A1 20021121
AI US 2001-927777 A1 20010810 (9)
RLI Continuation-in-part of Ser. No. US 2001-820279, filed on 28 Mar 2001, PENDING Continuation-in-part of Ser. No. US 2001-760500, filed on 12 Jan 2001, PENDING Continuation-in-part of Ser. No. US 2000-603830, filed on 26 Jun 2000, PENDING Continuation-in-part of Ser. No. US 1999-344667, filed on 25 Jun 1999, GRANTED, Pat. No. US 6361944 Continuation-in-part of Ser. No. US 1999-240755, filed on 29 Jan 1999, ABANDONED Continuation-in-part of Ser. No. WO 1997-US12783, filed on 21 Jul 1997,

UNKNOWN
PRAI US 1996-31809P 19960729 (60)
US 2000-176409P 20000113 (60)
US 2000-200161P 20000426 (60)
US 2000-192699P 20000328 (60)
US 2000-254392P 20001208 (60)
US 2000-255235P 20001211 (60)
US 2000-224631P 20000811 (60)
DT Utility
FS APPLICATION
LREP Emily Miao, McDonnell Boehnen Hulbert & Berghoff, 32nd Floor, 300 S. Wacker Drive, Chicago, IL, 60606
CLMN Number of Claims: 598
ECL Exemplary Claim: 1
DRWN 64 Drawing Page(s)
LN.CNT 11435
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides methods of detecting a nucleic acid. The methods comprise contacting the nucleic acid with one or more types of particles having oligonucleotides attached thereto. In one embodiment of the method, the oligonucleotides are attached to nanoparticles and have sequences complementary to portions of the sequence of the nucleic acid. A detectable change (preferably a color change) is brought about as a result of the hybridization of the oligonucleotides on the nanoparticles to the nucleic acid. The invention also provides compositions and kits comprising particles. The invention further provides methods of synthesizing unique nanoparticle-oligonucleotide conjugates, the conjugates produced by the methods, and methods of using the conjugates. In addition, the invention provides nanomaterials and nanostructures comprising nanoparticles and methods of nanofabrication utilizing nanoparticles. Finally, the invention provides a method of separating a selected nucleic acid from other nucleic acids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 8 OF 8 USPATFULL on STN
AN 2002:116060 USPATFULL
TI Highly sensitive biological agent probe
IN Megerle, Clifford A., Thousand Oak, CA, United States
PA Lockheed Martin Corporation, Bethesda, MD, United States (U.S. corporation)
PI US 6391624 B1 20020521
AI US 2000-585549 20000602 (9)
PRAI US 1999-137597P 19990603 (60)
US 1999-154037P 19990916 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Whisenant, Ethan C.; Assistant Examiner: Lu, Frank
LREP Venable, Aitken, Andrew C.
CLMN Number of Claims: 18
ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 832
AB An improved biological probe is disclosed that employs a plurality of groups of modified single-stranded DNA attached to a single **electrode**. Using a **plurality** of such groups increases the inherent sensitivity of the probe by providing additional hybridization location sites and also serves to improve performance by diminishing steric hindrance caused by the crowding and tangling of the long single-stranded oligionucleotide molecules. The modification of the oligionucleotides involves the attachment of electron donor and acceptor moieties that alters the electrochemical properties of the hybridized molecules. The selected groups of modified oligionucleotides are complementary to unique characteristic sequences of the target DNA or RNA. A sample that containing oligionucleotides of a target biological agent is brought into contact with the probe and complementary portions of the molecules will hybridize with the oligionucleotides attached to the probe. When voltage is applied to the electrode, **current**

will flow through the hybridized molecules with little resistance. **Measurement** of the **current** or changes in the **current** within the probe will indicate the presence of target DNA or RNA.

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